



AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for producing a peptide having three or more amino acid residues, comprising:

forming the peptide having three or more amino acid residues with an enzyme or enzyme-containing substance,

wherein the enzyme or enzyme-containing ~~substrate~~ substance has an ability to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than the amine component;

wherein said carboxy component is an amino acid ester or an amino acid amide;

wherein said amine component is selected from the group consisting of an unprotected peptide having two or more amino acid residues, a C-protected peptide having two or more amino acid residues, and a peptide having two or more amino acid residues and having a C-terminal amine in place of an amino acid;

~~wherein said enzyme-containing substrate comprises said enzyme~~

wherein said carboxy component has an unprotected amino group; and

wherein said peptide having three or more amino acid residues contains an amino acid residue derived from said carboxy component at the N-terminus thereof.

2. – 5. (Canceled)

6. (Currently Amended) The method for producing a peptide according to claim 1, wherein said enzyme is a protein selected from the group consisting of:

a protein having an amino acid sequence consisting of amino acid residues numbers 21 to 619 of an amino acid sequence described in SEQ ID NO: 12, and

a protein having an amino acid sequence including substitution, deletion, insertion, and/or addition of one or ~~a plurality to ten~~ of amino acids in the amino acid sequence consisting of amino acid residues 21 to 619 of the amino acid sequence described in SEQ ID NO: 12, ~~and having activity to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than an amine component.~~

7. (Canceled)

8. (Currently Amended) The method for producing a peptide according to claim 1, wherein said enzyme is a protein selected from the group consisting of:

a protein having an amino acid sequence described in SEQ ID NO: 12, and

a protein containing a mature protein region, the protein having an amino acid sequence including substitution, deletion, insertion, and/or addition of one or ~~a plurality to ten~~ of amino acids in the amino acid sequence described in SEQ ID NO: 12, ~~and having activity to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than the amine component.~~

9. (Previously Presented) The method for producing a peptide according to claim 1, wherein the microbe is a microbe belonging to the genus *Empedobacter* or belonging to the genus *Sphingobacterium*.

10. (Canceled)

11. (Currently Amended) The method for producing a peptide according to claim 1, wherein said ~~protein~~ enzyme is a product of a microbe that has been transformed so as to express a protein encoded by a polynucleotide selected from the group consisting of:

a polynucleotide consisting of nucleotides 121 to 1917 of the nucleotide sequence of SEQ ID NO: 11, and

a polynucleotide that hybridizes with a polynucleotide consisting of a nucleotide sequence complementary to the nucleotide sequence consisting of nucleotides 121 to 1917 of the nucleotide sequence of SEQ ID NO: 11 under stringent conditions, and encodes a protein that has a peptide-forming activity,

wherein said stringent conditions ~~comprises~~ comprise hybridizing at 60°C in a salt concentration corresponding to ~~1×SSC~~ 0.1×SSC and 0.1% SDS.

12. (Canceled)

13. (Currently Amended) The method for producing a peptide according to ~~claim 2~~ claim 1, wherein said ~~protein~~ enzyme is a product of a microbe that has been transformed so as to express a protein encoded by a polynucleotide selected from the group consisting of:

a polynucleotide consisting of nucleotides 61 to 1917 of the nucleotide sequence of SEQ ID NO: 11, and

a polynucleotide that hybridizes with a polynucleotide consisting of a nucleotide sequence complementary to the nucleotide sequence consisting of nucleotides 61 to 1917 of the nucleotide sequence of SEQ ID NO: 11 under stringent conditions, and encodes a protein that has a peptide-forming activity,

wherein said stringent conditions ~~comprises~~ comprise hybridizing at 60°C in a salt concentration corresponding to ~~1×SSC~~ 0.1×SSC and 0.1% SDS.

14. (Previously Presented) The method for producing a peptide according to claim 1, wherein the carboxy component comprises at least one amino acid ester selected from the group consisting of an L-alanine ester, a glycine ester, an L-threonine ester, an L-tyrosine ester and a D-alanine ester.

15. (Previously Presented) The method for producing a peptide according to claim 6, wherein said enzyme is a protein having the amino acid sequence consisting of amino acid residues 21 to 619 of SEQ ID NO: 12.

16. (Currently Amended) The method for producing a peptide according to claim 6, wherein said enzyme is a protein having an amino acid sequence including substitution, deletion, insertion, and/or addition of one to ten amino acids in the amino acid sequence consisting of amino acid residues 21 to 619 of SEQ ID NO: 12, ~~and having activity to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than an amine component.~~

17. (Previously Presented) The method for producing a peptide according to claim 8, wherein said enzyme is a protein having the amino acid sequence consisting of SEQ ID NO: 12.

18. (Currently Amended) The method for producing a peptide according to claim 8, wherein said enzyme is a protein containing a mature protein region, the protein having an amino acid sequence including substitution, deletion, insertion, and/or addition of one to ten amino acids in the amino acid sequence of SEQ ID NO: 12, ~~and having activity to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than the amine component.~~

19. (Previously Presented) The method for producing a peptide according to claim 11, wherein said enzyme is a protein which is a product of a microbe that has been transformed so as to express a protein encoded by a polynucleotide consisting of nucleotides 121 to 1917 of the nucleotide sequence of SEQ ID NO: 11.

20. (Currently Amended) The method for producing a peptide according to claim 11, wherein said enzyme is a protein which is a product of a microbe that has been transformed so as to express a protein encoded by a polynucleotide that hybridizes with a polynucleotide consisting of a nucleotide sequence that is complementary to the nucleotide sequence consisting of nucleotides 121 to 1917 of the nucleotide sequence of SEQ ID NO: 11 under stringent conditions, and said protein that has a peptide-forming activity,

wherein said stringent conditions ~~comprises~~ comprise hybridizing at 60°C in a salt concentration corresponding to ~~1×SSC~~ 0.1×SSC and 0.1% SDS.

21. (Previously Presented) The method for producing a peptide according to claim 13, wherein said enzyme is a protein which is a product of a microbe that has been transformed

so as to express a protein encoded by a polynucleotide that consists of nucleotides 61 to 1917 of the nucleotide sequence of SEQ ID NO: 11.

22. (Currently Amended) The method for producing a peptide according to claim 13, wherein said enzyme is a protein which is a product of a microbe that has been transformed so as to express a protein encoded by a polynucleotide that hybridizes with a polynucleotide consisting of a nucleotide sequence that is complementary to the nucleotide sequence consisting of nucleotides 61 to 1917 of the nucleotide sequence of SEQ ID NO: 11 under stringent conditions, and said protein contains a mature protein region having a peptide-forming activity,

wherein said stringent conditions ~~comprises~~ comprise hybridizing at 60°C in a salt concentration corresponding to ~~1×SSC~~ 0.1×SSC and 0.1% SDS.

SUPPORT FOR THE AMENDMENTS

Claim 2-5, 7, 10, and 12 were previously canceled.

Claims 1, 6, 8, 11, 13, 16, 18, 20, and 22 have been amended.

Support for the amendment of Claims 1, 6, 8, 11, 13, 16, 18, 20, and 22 is provided original Claims 1, 2, 3, 4, 6, 8, 11, 13, and 14, and by the specification as filed at page 3, line 10 to page 4, line 15, page 13, line 15 to page 15, line 13, page 27, lines 13-22, page 31, lines 5-8, and the Examples.

No new matter has been added by the present amendment.